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ISSN: 0740-2759

APRIL 1985

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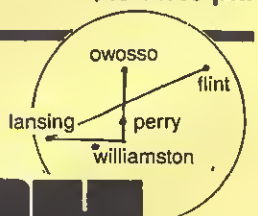

PERRY COMPUTERS

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MARCH 1985

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CONSORTIUM CALENDAR

APRIL 1985

MAY 1985

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SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 April Fool	2	3	4 M3G EXEC	5 Good Friday	6 Passover CCUG
7 Easter	8	9 TI USERS GROUP	10 HEATH SIG	11 LACC	12	13
14	15 EPSON USERS ENERGY DEADLINE	16 CMTUG	17 M3G	18	19	20 CHAOS APPLE LUG
21	22	23 UPCO (IBM PC)	24 OSBORNE SIG	25 CP/M SIG	26 DAYTON HAMFEST	27 DAYTON HAMFEST
28 DAYTON HAMFEST	29	30				

LANSING AREA COMPUTER CLUBS

Apple LUG (Lansing Users Group)
Meets: Third Saturday, 9:30 A.M.
102 South Kedzie Hall, MSU, East Lansing
Contact: P.O. Box 27144, Lansing, MI 48909

CCUG (Greater Lansing Color Computer Users Group) (MC2)
Meets: First Saturday, 1:00 P.M.
East Lansing Public Library, 950 Abbott, E.L.
Contact: P.O. Box 14114, Lansing, MI 48901
Terry Feichtenbiner 371-1594

CHAOS (Capitol Hill Atari Owners Society) (MC2)
Meets: Third Saturday 9:00 AM
Foster Community Center, 200 N. Foster, Lansing
Contact: Leo Sell 393-7792

Comp Klub of Lansing (TI Users Group)
Meets: 2nd Tuesday, 7:00 pm
River Front Community Bldg.
501 N. Cedar St., Lansing
Contact: John Hayes 882-7860; Eugene Loyd 394-1494

Epson Users Group
Meets: Third Monday, 7:00 pm
Computer Source West, 422 Elmwood, Lansing
Contact: Ted Bozarth 332-3710 (after 8 PM)

LACC (Lansing Area Commodore Club)
Meets: Second Thursday, 7:30 PM
All Saints Episcopal Church, 800 Abbott, E.L.
Contact: Jae Walker (president) 351-7061

M3G (Mid-Michigan Microcomputer Group) (MC2)
Meets: Third Thursday (usually), 7:30 PM
East Lansing Public Library, 950 Abbott, E.L.
Contact: Warren Wolfe 337-7672
Executive Meetings:
First Thursday, 7:30 PM
Beggar's Banquet, 218 Abbott, East Lansing

M3G CMTUG (Central Mich. TRS-80 Users Group) SIG (MC2)
Meets: Third Tuesday, 7:30 PM
Foster Community Center, 200 N. Foster, Lansing
Contact: Lee Hodges 669-3258

M3G CP/M SIG (MC2)
Meets: Last Thursday, 7:30 PM
Foster Community Center, 200 N. Foster, Lansing
Contact: Greg Martin 484-5850

M3G Heath/Zenith SIG (MC2)
Meets: 2nd Wednesday, 7:30 pm
All Saints Episcopal Church, 800 Abbott, E.L.
Contact: Tom Trana, PO Box 829, East Lansing MI 48823

M3G Osborne SIG (MC2)
Meets: Last Wednesday, 7:30 pm
East Lansing Public Library, 950 Abbott, E.L.
Contact: Larry Tirone 484-3921

U.P.C.O. (Users' Personal Computer Organization--IBM PC group)
Meets: 4th Tuesday, 7:30 PM
Rm. 118, Agricultural Engineering Bldg., MSU
Contact: Skip Osterhus 321-3425

Clubs designated (MC2) are members of the Michigan Computer Consortium.

This listing is as accurate as the information we receive. To list an event or update information, contact Joe Werner at 337-7415 (evenings), or on the local BBSs BabbleNet or LSJ Access, or via MCI Mail (JWERNER).

ABOUT ENERGY

ENERGY (ISSN 0740-2759) is published monthly by the Michigan Computer Consortium, Inc., P.O. Box 1302, East Lansing, Michigan 48823.

Subscriptions to ENERGY are provided as a benefit of membership in one of the clubs constituting the Consortium. Subscriptions are not otherwise sold. For information about joining one of the clubs in the Consortium, write the club at the address above.

ABOUT THE MICHIGAN COMPUTER CONSORTIUM

The Michigan Computer Consortium (MC2) was formed in 1983 to sponsor joint activities involving member computer clubs. Current members of MC2 are:

CCUG (Greater Lansing Color Computer Users Group)
CHAOS (Capitol Hill Atari Owners Society)
CMTUG (Central Michigan TRS-80 Users Group)
M3G (Mid-Michigan Microcomputer Group)

Information about each of these clubs is published elsewhere in ENERGY.

ADVERTISING

Advertising in *ENERGY* is an economical way to promote your products or services to a key audience involved in personal computing. Four sizes of ads are available: business card, quarter-page, half-page, and full-page. Advertising space is limited and controlled, so that ads will never get "lost". Camera-ready copy is needed by the 15th of the month preceding publication. Limited graphics artwork is available at an extra charge. For more information, contact the Editor.

ARTICLE SUBMISSIONS

Persons wishing to submit articles are encouraged to do so. Articles may be submitted via CompuNet or in camera-ready form (3.5 inch columns, 16 characters per inch, 8 lines per inch), or on disk. Contact any Editorial Board member. The deadline for articles is the 15th of the month preceding publication.

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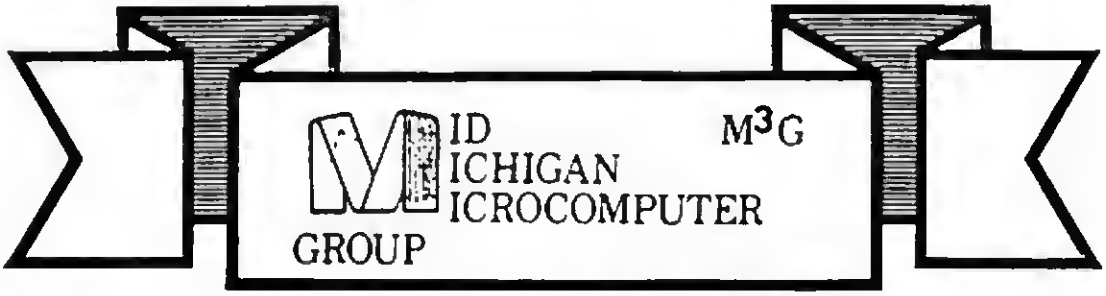
If a store doesn't advertise here, then let them know you would like to see their ad in *Energy*. Many dealers need to understand how many bonafide users read *Energy* regularly.



ABOUT M3G

Mid-Michigan Microcomputer Group (M3G) is a non-profit organization of computer hobbyists, enthusiasts, and users in the Lansing and Mid-Michigan area. Formed in 1975, M3G is the oldest personal computer organization in the area, and one of the pioneer organizations in the country. Membership in the club is open to anyone with an interest in personal computing.

MEETINGS

General Membership meetings are held each month, generally on the third Thursday of each month (barring scheduling problems), at 7:30 pm, at the East Lansing Public Library, 800 Abbott Road, East Lansing. Executive Committee meetings are held on the first Thursday of each month at 7:30 pm, at Beggars Banquet restaurant in East Lansing.

DUES

Annual dues for M3G are $12.00, for 12 consecutive months. Family memberships (two or more people at the same address, receiving only one copy of the Newsletter) are available. The Master member pays full dues; additional family members joining at the same time each pay $1.00 per year.

To join M3G, come to any meeting, or send one year's dues with your name and address to: M3G, c/o P.O. Box 1302, East Lansing, Michigan 48823.

AFFILIATIONS

M3G is a member of the Midwest Affiliation of Computer Clubs (MACC), and of the Michigan Computer Consortium (MC2).

NEWSLETTER

M3G members receive ENERGY, published by the Michigan Computer Consortium, as a benefit of membership.

SPECIAL INTEREST GROUPS

M3G currently has four active Special Interest Groups: the Central Michigan TRS-80 Users Group (CMTUG) SIG, the CP/M SIG, the Heath/Zenith SIG, and the Osborne SIG. These SIGs hold additional meetings as their members desire, and may charge SIG dues in addition to M3G dues if the SIG so decides. SIG meetings are announced in the Meeting Calendar in ENERGY. Additional SIGs may be formed on any computer-related topic which M3G members may want.

EXECUTIVE COMMITTEE

President.....Warren Wolfe.....337-7672
Vice President.....(Vacant)
Secretary.....Dean Shipman.....355-6181
Treasurer.....Joe Werner.....337-7415

MACC Trustee.....Frank Dolinar.....351-1779
MC2 Delegate.....Joe Werner.....337-7415
CMTUG SIG Chairman.....Lee Hodges.....669-3258
CP/M SIG Chairman.....Greg Martin.....484-5850
Heath/Zenith SIG Chan...Tom Trana
Osborne SIG Chairman....Larry Tirone.....484-3921

To join M3G, please fill out the following, enclose with your dues, and mail to M3G, c/o P.O. Box 1302, East Lansing, MI 48823, or come to a meeting.

NAME:_____.

ADDRESS:_____.

CITY, STATE:_____. ZIP:_____.

PHONE:_____. (home)_____. (office)

Dues:	( ) M3G	$12.00
	( ) CMTUG SIG	(no additional dues)
	( ) CP/M SIG	(no additional dues)
	( ) Heath/Zenith SIG	(no additional dues)
	( ) Osborne SIG	$ 2.00
	TOTAL:	

VIEW FROM THE SIDE

Warren Wolfe,
Data Basics
President, M3G

As I write this, the guset epeaker for the April meeting of M3G hae not been chosen. If this state of affaire continues, the topic of the April meeting will be Public Domain Software for the IBM PC, prssanted by yours truly. If you know of a epeaker who has some free time, do us all a favor, and let me know!

The Public Domain Yardstick

Opsrating systems are programs. Like other programs, they may be wsll written, or poorly written. They mey also be well received, or poorly rscsived by the purchasing public. There are many operating systems in use today, and some of them ere widely snough uesd that they ettract many programmers who are willing to write programs end place these progrems in the public domain. Oftan, thesa programs correct real or imagined flaws or dsficiencies in the operating syetem itself.

Many people in personal computing are unaware of the concept of the public domain. This is not eurprising, ae many retailers are understendably reluctant to inform their cuetomsrs that free programs are suiteble rsplacements for products the retailers eell. What surprises me is the remarkably high lsvel of quality of some of the public domain offsrings. There is a law that states that ninety percent of everything is junk (or something leas aocially accsptable). This is trus with public domain software. There ere many programs which will lock up your machine if run. Some will damage data on an innocent disk or disketta. Public domain softwars is exciting!

Ths history of personal computing can be msasured by the output (and quality) of ths public domain software generated. The mainframe computer world has generated almost no public domain software. Many of the varioue machinos that have withered and died have left little free software behind. The firet system to pour out public domain softwers was ths CP/M operating systen. Many of ths "proto-hackers" of those ancisnt daye (ten years ago) bought ths first computer system that thsy could afford. This was, in many cases, the Altair or IMSAI machines. Thsrs was a remarkeble base of talented programmers who owned these systems, and most of them bought CP/M when it was available. Anyone who has loaded programs from cassetts or paper tape will understand. Suddenly, thsrs was a massive ussr bass for what amountad to a toy operating system. The first vsreion of CP/M was almost literally a wsekend project.

The placement of the Basic-E compiler in the public domain by Gordon Eubanks produced a situation in which programmers had a high level language pregramming environment which was inexpensivs and functional. Public domain softwere eprouted from coast to coast, passad on by computsr clube and bulletin board systems. The first weve of public domain software was in full swing.

Progress ie rapid in computing, and before long, CP/M was replaced by PC-DOS as ths operating eystem used by the majority of computer owners in the programming buainese. This led to e rich sst of public domain utilities bsing dsveloped for the IBM PC. Some of thsee were re-writse of the CP/M utilities for the new machine, and many took advantage of the increaesd flexibility of tha operating system and hardwere architecture to perform the functions traditionelly reserved for mainframes, or expeneive software packages. The public domain software availeble for the IBM PC is aleo moetly junk. Amidet ths trash, however, are a few priceless gems, and a significant numbsr of competently written, ussful progrems. Unfortunately, one has to sift through sixty or seventy diskettes worth of softwere to find e handful of useful programs. The evarage user of PC-DOS is less likely to know of public domain software than the averags CP/M user. Thia is unfortunate, as there are some truly classy programe available.

PC-DOS has been ths birthplacs of a variation of the public domain thems: Freeware. Freewars is software that the author allows to be copied and dietributed fraely, often witb a coupls of restrictione that very from program to program. The user of the "freeware" ie sncouregsd to try ths progran out, and use it on a regular basie. If the user likes ths softwars, the author requeste tbat the ussr send in a voluntary payment, uually in the $5 to $35 range. To my mind, thie is a nearly perfect scheme for all partise. It sesme that few people will "stiff" an author of good softwers if ths euthor allowe the usar to get hooked on ths software without financiel obligation. The author hae little or no marketing to do, as the eoftware is frsely distributed by olubs and bulletin boards. Money trickles in from satiefied users, and those poor souls who hocked their children to buy the latest hardware can run legitimate software until they can afford to pay for it, or replace it if they ars not satisfied with the performance of the freeware package. Yankse ingenuity livas!

There is another wave of software brewing. All indications are that Unix is the operating systsm of the future. I suspect that some valiant soule will be producing tons of public domain software for Unix in the nsar future, if they aren't already doing so. There is no operating syetem so good thet someone won't want to add hie two cents' worth to it. I would euepect, dus to the nature of the Unix environment, that the Unix public domain software will be almoet entirely written in the 'C' programming language, offering great opportunitiee to retrofit ths new softwars into the CP/M and PC-DOS worlds.

In order to pass on the benefits of public domain software. make a buck or two, and hslp others avoid the tedium of trying out all the junk to find the gems, I am compiling diskettes of "Ths Best of Public Donain Software" on the Data Basice label. The first of these diskettes is a collection of apparently stable utilities that are usaful to the PC-DOS (or MS-DOS) user, along with documentetion for their use. I hevs written documantation whers none is available. The first diskette aleo deecribes the msthods used to organize ths other diskettes, and provides the utilities needed to use the programs on all subsequent diskettes. I will provide thsss diskettes for $5 sach at the April mssting ($7.50 if, like me, you ara a fanatic who ineists on Dyean dieketteo). If demand outetripe supply, I will take orders.

Hopefully, everyone who usss computsrs can be exposed to public domain software. It is an avenue of exploration that has few couterperts in the commercial world. How many individuals can afford to buy or rent dozens of software packagse on the off chance that ons or two of them will be worthwhils?

THE USER

by Joe Werner

The Data General/One

In these columns over the past few months, I've managed to review two portable computers (the HP Portable and the HP Integral). Since Data General announced their portable (the Data General/One), I've been looking for one to "test-drive".

Recently, my wife and I got a chance to play with one. We had to go to the Chicago area to do it, and we had less than an hour to evaluate it. But I'd like to share some impressions.

First, a bit from the specifications. The Data General/One (DG/1) is a 9.1 pound notebook-sized portable. It is claimed to be "Operationally compatible" with the IBM PC. Thus, it contains an 80C88 CMOS processor chip, and 128K to 512K of RAM. It has a 640 by 256 pixel Liquid Crystal Display (LCD) with bit-mapped graphics and a 2:1 aspect ratio. It has one built-in 720 KB 3.5 inch diskette drive; a second is optional, as is an external 5.25 inch diskette drive. Two asynchronous serial ports are included to connect to printers or modems. An internal 300 bit per second modem is optional; as is a battery pack and recharger (the batteries are rated at 8-10 hours before you need to recharge them; if you don't want the battery pack, you get an AC adapter as standard), carrying case, and expansion chassis. (This expansion chassis deserves some note. Supposedly, it contains an IBM-compatible card cage, to which you could add IBM PC-compatible hardware. This could allow you, for example, to generate standard color video from a graphics card to a monitor.) The system runs MS-DOS or CP/M-86, and should be able to run many IBM PC compatible packages. Some are available for purchase in 3.5 inch diskette format; others will have to be transferred from 5.25 inch diskettes first.

There has been a lot written recently in the trades about the DG/One and its LCD display. This is the first 80 by 25 line LCD display on a commercial portable, and a lot of users (judging from the items I've read) find it a bit deficient. Of course, all LCDs suffer from some of the same problems, since the nature of LCD is that it reflects or absorbs ambient room light. In too weak a light, the screen can't be read; in too strong a light, the screen washes out. The first versions of the DG/One had a glare-reducing filter, which unfortunately also helped reduce the contrast of the LCD. They replaced the glare filter with a clear optical cover, in an attempt to help. They have subsequently made a production change to try to increase contrast even more.

The version we were looking at was, I suspect but could not confirm, one of the intermediate systems, with the clear LCD cover but without the most recent production change. We found the screen readable, but definitely dependent upon the surrounding lighting. Intense fluorescent lighting in the showroom made it a bit more difficult to read; shielding the screen a bit cut down on reflected glare and improved the view considerably. (I can't help a comparison: the HP Portable allows you to adjust the angle of the screen, and also has contrast adjustments. The DG/One has neither, and could profit from them.)

However, as I said, we found the screen readable, and the typeface crisp. The graphics were of good quality. On the whole, I think the LCD controversy is a bit overblown. But, by all means, look closely at any LCD display for readability before you buy any portable.

The salesperson who was showing us the DG/One made an interesting point about LCD displays: it may be a good thing that LCD displays are hard to read if you're not right in front of them. If you're using a portable on a plane or a commuter train (this was the Chicago area, after all), you don't want the person in the next seat seeing what you're working on. It's a thought!

The keyboard is another interesting point -- if you're going to spend most of your time in front of the LCD display, you're probably going to spend almost the same amount of time in front of the keyboard! The DG/One keyboard is smaller than the "standard" PC keyboard; the keys are smaller and closer together. But after a short time (5 minutes or so) of getting used to it, it was quite a comfortable keyboard, with a very good feel to it. There was one problem Ginny had with it: the keyboard is a deeply sculpted keyboard. The bottom row of keys (ZXCVBNM...) is raised up rather high for her tastes - she occasionally hit a wrong key. I'm not sure if it was the placement, the orientation, or what. I suspect one could get used to it.

We noted that the specifications provide for two RS-232 Asynchronous Serial ports as standard. However, no parallel printer port is provided, which means that you'll have to use a serial-interface printer or buy the Expansion Chassis and an IBM-style parallel interface board. Data General sells a portable battery-operated plain-paper (thermal transfer ribbon) printer for the DG/One. It works and is portable, but it's rated at 20 to 40 characters per second; I wouldn't want to do volume printing on it.

In an hour, we did not have time to do much experimenting with benchmarks or other tests. We did not have any chance to verify or quantify IBM compatibility. (This is a gray area, since any computer claiming PC compatibility falls short of absolute 100 % compatibility.) We didn't even get it on-line to see if it could communicate as a terminal (I was assured that the store had tried it). We were able to notice that the system ran very nicely, and the 3.5 inch diskettes work smoothly and quietly. The documentation we saw (some had wandered into the back of the store and had temporarily disappeared) was quite good, and looked very professional.

The last thing we got into was the bottom line. A basic version of the DG/One lists for around $2600. But that's a very stripped-down version, with one diskette drive, 128 K of RAM, and no software. Several additional-cost options are needed to make the system reasonably useable. Adding the second diskette drive, more memory, the modem board, and some software could easily add $1000 or more to the base price. Choose your configuration carefully, and if you're comparing prices with, say, the HP Portable, be sure to compare similar configurations in software as well as hardware.

The Data General/One represents a milestone in notebook-sized portable systems, offering a portable with full 80 character by 25 line display, standard keyboard, built-in diskettes, and battery operation. If these are features you need, you should certainly consider the DG/One. Its competition today does not offer the same set of features. But that is not likely to remain true for long. Expect new introductions, both from the current players like HP and Morrow, and from young-upstart companies like IBM jumping into the market.

[Our thanks to John Theodore, of the Heath/Zenith Computers and Electronics store, 224 Ogden Avenue, Downers Grove, Illinois 60615, for showing us the Data General/One.]

MORROW MEMOS

NEW KID ON THE BLOCK
BY CHERYL L BIRONE

Software is always on every computer owners mind. What is good, what can I use, will it benefit me, etc... well I'm always on the lookout, and especially programs that will run on my Morrow Design Micro Decision II. It is a Z80 CP/M machine and will run most CP/M software, the exception being graphics programs. It is my intent to try and review CP/M software in general, software running on the Morrow specifically, and build a public domain library.

Of course part of my goal is to reach fellow Morrow users, but I'm also interested in those folks who are still living in the world of CP/M. As the library grows I will try to make it available for copying. If you provide the diskette, for a $1.00 charge for copying, I will provide the software. At this time the library is very small but I do hope to increase its size in the next few months.

If you care to send me a self addressed stamped envelope, I would be happy to send a brief catalog of the software I do have. If you have a piece of software that you would like to see reviewed in this column, I can be found at the regular M3G meetings.

At this time I have been working with a public domain program called 'NSWEEP'. It is a user interface to CP/M that is menu driven and simple to use. Dave Rand, the author, has provided decent documentation that is readable and makes learning to use NSWEEP easy. There are approximately 18 commands and each command is covered individually in a brief synopsis.

The commands are:

1) HELP
2) FORWARD AND BACKWARD
3) EXITING
4) FINDING A FILE
5) VIEWING AND PRINTING
6) DELETING A FILE
7) COPYING
8) RENAMING
9) THE SPACE COMMAND
10) THE LOG COMMAND
11) THE TAG COMMAND
12) WILDCARD TAGGING
13) THE UNTAG COMMAND
14) THE MASS COPY COMMAND
15) AFTER THE MAS (AGAIN)
16) ERASING FILES
17) SQUEEZING AND UNSQUEEZING FILES
18) SETTING THE FILE STATUS

Each command is invoked by a single letter or a single letter followed by several symbols. The entire list of commands can be displayed on the screen by typing '?' or the **HELP** command.

To invoke 'NSWEEP', you type 'SWEEP' or 'SWEEP B:'. Once invoked 'NSWEEP' brings up a list of the directory of the currently logged drive. Also at this time 'NSWEEP' will tell you what drive you are logged in to, what the total k of used space is, how many files there are, and how many k are free.

The **FORWARD** and **BACKWARD** commands control whether you scroll through the list of displayed files forwards or backwards. They are CR or SP for forward and 'B' for backward. The **EXITING** command returns you back to CP/M. That command is 'X'. The **FINDING A FILE** command will allow you to go directly to a file you are looking for. The 'F' command is used and when invoked will then prompt for the file you wish to find. The commands for **VIEWING AND PRINTING** are 'V' and 'P'. The 'V' command will act as the CP/M 'type' command, and the 'P' command will act as the CP/M 'ctrl p' command. **DELETING A FILE.** the 'D' command will delete a single file. **COPYING A FILE** will allow a single file to copied. it is the 'C' command. A file may also be **RENAMED** using the 'R' command. The **SPACE COMMAND**, 'S', will allow you to check the available space on the drive specified. A new drive may be logged into using the **LOG COMMAND.** You may select a new drive and/or user. This is the 'L' command. The **TAG COMMAND**, 'T', is used to tag files for future manipulation. Also, **WILDCARD TAGGING.** '*' may be used just as you would use wild cards in CP/M file handling. In this way you may work with select groups of files. Also, a file may be **UNTAGGED** using the 'U' command. This will exempt the file from tagged operations. The **MASS COPY COMMAND** is used with tagged files to copy them in a select group. If having worked with a group of files once, you wish to do so again, the **AFTER MASS (AGAIN)** command, 'A', can be used to retag all previouly tagged files. You may also erase files using the **ERASE COMMAND**, and erase files in groups. The 'E' command may be used to erase either all tagged files or all untagged files. 'NSWEEP' also can **SQUEEZ AND UNSQUEEZ** files, 'Z'. This is done in conjunction with tagging files. All files tagged will be squeezed if not and unsqueezed if they are. Finally you may set the **FILE SIATUS** with the 'S' command. All CP/M status flags are available to use.

If you have trouble remembering the CP/M commands or you wish you had an easier way to handle file copying and backing up, 'NSWEEP' is handy to have around. It can take alot of the command line typing out of CP/M. The program is public domain, and I currently have the program and its documentation in my library.

H/Z SIG NEWS

by Thomas Trana

Part of the January meeting of the SIG reminded me of a scene from the game M.U.L.E., where by standing still you can appear to rapidly advance--because all other players are rapidly retreating past you! I was seated at the foot of the table, holding a quiet conversation with a neighbor, when I vaguely heard Bill Goodwin say something like "we need to find a new chairman for the SIG because I don't have time to do it right now." Since I didn't feel that concerned me directly, I continued the conversation until I realized that the proverbial pregnant pause existed. I looked up to see what was going on and found everyone looking at me. Someone said, "Tom, were you volunteering?" I said something typically intelligent and witty like "Huh, who, me?" I tried to tell them there were others more qualified for the job who simply hadn't gotten up the courage to speak up yet (computer people are so shy, aren't they?). I refrained from saying "O.K., I'll do it" for two months, convinced that someone else would come forth (I mean, basically, the job doesn't involve that much, simply someone to hold down the fort, see, someone to serve as a pilot for the group direction--by the way, maybe we should consider developing a logo for our group?--someone to direct the small talk during and after the meetings, and furthermore I was worried that under the stress of chairing the meetings I might revert to the lisp that I had when I was a child), some brave, noble, forthright soul would fearlessly stride forward and say, "Yes, I want to be the H/Z SIG chairman--I have bold visions of where this club should go, I have great ideas for club programs, and my girl friend, Adalia, is a great cook and will bring cookies to all the club meetings." But, alas, no one did, and I needed to use my right arm to do some work (do you know how sore an arm can get after being twisted for two months?), so I finally gave in.

The March meeting was probably the longest SIG meeting yet held, although it didn't start too auspiciously. First, the chairman didn't show up (I guess that's one way to get out of a job--quit showing up for work!) There was no machine there, so no software got copied. A guest of honor almost didn't find the place. And when he did, he snuck in the back way, leaving three frigid figures standing out on the curb in front of the church in a brisk March wind, looking for him for ten minutes after he was already inside and warm. However, things got better after that. The last-minute guest was Bill Fisher, of Zenith Data Systems (ZDS). Bill has been coming to MSU for at least the year+ that I have been interested in Zenith computers, and recently was promoted from being in charge of educational sales for a four state area to handling the same thing for Michigan only. Zenith is still taking the college/university market very seriously. Now that Bill won't have to cover so much territory, he can spend more time with local current and future accounts. The latest ploy that Zenith has come up with to separate us impoverished academic types from our money is to hold truckload sales on campuses. Zenith brings in a truckload of computers, peripherals, and software, usually in cooperation with an area dealer (in this case, with the new Zenith computer dealer in town, L. E. Lighthart--more on that in a future column) and sells the equipment right off of the truck to qualified buyers. This will not only eliminate shipping charges for such shoppers, but also the impatient wait after ordering the computer from a remote source. The sale will be April 1 and 2, with demonstrations at the MSU Computer Center (Room 215) on 1 April, with actual sales held Monday afternoon and Tuesday. The sales will be conducted at Long's Convention Center and ZDS plans to have a shuttle van running for those without transportation to Long's. This sale is restricted to MSU faculty, employees, and students, plus MSU departmental purchase orders.

Mr. Fisher told us a little about some developments that are underway at ZDS, answered questions about Zenith computers and software from attendees, and gave the disappointing news that the Gemini board (which was supposed to give the Z-100 computers IBM PC compatibility) appears to be another piece of fluffware. The manufacturer did not make even evaluation boards available until recently, although they have advertised the product for months. Although the board might eventually be revised to the point of some usefulness, so far it still has major problems, and is not the do-all, finished product that the manufacturer's ads imply. Bill says that he will try to make it to at least an occasional meeting of the SIG.

Another topic of interest in the Z-100 world is the mother board memory expansion using 256K RAM chips. This has been rumored and discussed for months and it looks as if it may finally be a reality. Without formal announcement or any fanfare, several months ago ZDS changed the mother boards in the Z-100 computers to allow the use of the larger-capacity chips. The main stumbling blocks keeping users from doing this before now have been the high cost of the 256K devices, and the non-availability of associated controller chips. Supposedly, First Capitol Computer (the Software Wizardry retail division) now has available sets of the controller chips for around $90. With 256K RAM chips down to $10-12 apiece, this means that it is possible to expand RAM memory on the new mother boards from the current 192K to 768K for less than $400, whereas an S-100 bus board has been costing about $600-800 for 256K (though with the recent price drop in 64K chips, boards will likely get cheaper too--in the latest Byte, someone is selling a Compupro 512K S-100 RAM board for $695!!).

At this point, it is uncertain what will be covered at the April meeting (Apr. 10, 7:30 p.m.); there is no formal program set yet. However, arrangements have been made for a machine to be available, and since it has been two or three months since any program exchange has occurred, there should be some things available. I will try to schedule something, even if only demos of some short programs, and Bill Fisher may be back in town, so there should be something of value. Drag somebody new along!

OSBORNE SIG NEWS

Well, now with two meetings under our belts, it appears that the Osborne Special Interest Group shall continue on its way as an individual of Mid-Michigan Microcomputer Group. We are in need of someone from within the group to assist in the handling of all games that are in the OSIG Library. No experience is necessary, we will train. Send resume to: Larry Tirone, 168 Susan Drive, Lansing Michigan, 48906, or call me at 484-3921. Mark Desrosiers will take the task of handling all application programs, and I shall continue to handle the utility programs.

We need to continue to upgrade the library, and as such, we need all the contributions you have of public domain software. Continue to send all inquiries to me since I will continue to be the contact person.

Well so much for business, let's get on to the project at hand. This months OSIG article will be used to present a new public domain labeling program. 'Make Disk Label' (MDL.COM) was written in Z80 assembler using Microsoft's M80, along with the implementation of Richard Conn's SYSLIB. As such the general public will not be able to re-assemble it (ASM.COM will not work because SYSLIB needs to be linked into MDL's source). MDL.COM, when executed, will ask you to place a disk into drive B and hit any key to continue. MDL.COM will expect a printer at the CP/M list device capable of printing in compressed (17.5 characters per inch) mode. A standard 1 inch by 3.5 inch on continous form is also expected. Now the order of execution is:

1) Set the printer up as:
   a) 8 lines per inch.
   b) 17.5 characters per inch on the line
   c) 7 lines per form
   d) form length set to 1 inch
   e) Form feed
2) Request a disk be placed in drive b for labeling. And wait for any key to be pressed (Control C will take you to step 7).
3) Read in the directory off the disk that was placed into drive b.
4) Sort the directory into file name and file exteot order.

```
ie:  THISFILE.EXT
     ¦    ¦
     ¦    ¦<-- file extent (3 characters)
     ¦<---------- file name (8 characters)
```

5) Print directory entries 4 per line
6) Go back to step 1
7) Reset printer and exit

Edited Minutes from Saturday, March 9, 1985
Meeting called to order at 1:30 pm.

First order of business: Meeting Times

Several options were discussed in regards to future meeting of the Osborne Special Interest Group. First suggestion was to meet the fourth Wednesday of the month at the East Lansing Public Library. Second suggestion was to meet on the fourth Tuesday. Finally, a round robin approach was mentioned where the OSIG would meet at a different member's home on Saturdays. It was also discussed that the group check into other possible public facilities for meeting.

Second order of business: Treasuers Report

It was reported by Larry Tirone the OSIG treasury has a current balance of $28.35. Also discussed was a possible balance owed the OSIG membership by the M3G treasury. At the present M3G treasurer Joe Werner has agreed to perform an audit of M3G books to determine if a balance is indeed owed.

Third order of business: M3G Affiliation

It has been questioned as to what is the value of being a special interest group of M3G. As a group a possible five reasons were mentioned.

1) Energy Magazine
2) Possible Group Discounts
3) Possible Bulletin Board
4) Non-profit Organization Status
5) Local Store Discounts to Members

Fourth order of business: OSIG Format

It was decided that the group would maintain an informal format and dispatch duties to volunteers as needed. At present duties include.

Librarians
- Applications Mark Desrosiers
- Utilities Larry Tirone
- Communications Larry Tirone
- Games ((nobody yet))

Treasurer Diane Desrosiers
Club Contact Larry Tirone
M3G Representative Larry Tirone This format will be followed with the agreement that at any time another member may be asked or volunteers may be requested to assume a possible duty when a member no longer can mantain the responsibilities for any reason.

The meeting was adjourned at 3:00 pm.

After the business was completed Mark Desrosiers gave a demonstration on the use of the spelling program Spellguard. Also, Jim Pease brought his Epson Notebook computer to demmall discussion groups formed covering a variety of topics and interests.

An offer of CDC SS DD diskettes at a box of 10 for $9.90 was presented and Larry Tirone is arranging a group purchase. Anyone interested is invited to call and talk to Larry at 484-3921 or leave a message on LSJ-Access.

Respectfully Submitted Cheryl L. Tirone Recorder

As always, please fell free to contact me if you need any help. I can be reached at: Larry Tirone, 168 Susan Drive, Lansing, MI 48906 (517) 484-3921

UPCO Notes
by Skip Osterhus

What is UPCO you say? It is the local IBM PC user group. I've been the president since August 84 and I would like to tell you a little about the group. We are organized around the IBM product line but also include members with machines from other vendors (i.e. DEC, Columbia, Tandy, Eagle and Ericsson). Membership is $5.00 per year. We mail out a meeting notice each month to paid members. The notice is an agenda of the monthly meeting plus major club announcements. (Because we have no club newsletter, I'm using ENERGY as the club forum.) UPCO maintains a club library of about 60 disks that each member may purchase for $5.00 per disk. Also there are about 25-40 club disks that I bring to each meeting that can be copied free at the meeting. UPCO is a member of the IBM Exchange group and therefore each UPCO member is allowed read access on the IBM Exchange bulletin board in Boca Raton, FL. (Do not worry it is a toll free number!) Since November 84 we have been awarding a doorprize at each meeting. I could go on about what the club has to offer but the real benefit is the club membership. Each 4th tuesday about 35-55 members attend and share information on IBM personal computing. There is usually a main topic (A software, hardware or both demo) but the real enjoyment for me is the sharing of information.

Is the club for you? Only you can decide that for yourself. With IBM dropping the IBM PCjr maybe the answer is yes. With new IBM machines expected (even as I write column) the user is faced with more and more choices. UPCO members represent a wide variety of skills and backgrounds to share. There are questions each month that go unanswered but there are many that do get answered (and usually from experience).

Is the club for novices or is it for experts you ask? I will answer that question by saying it is for you the MEMBER. Each month I get feedback that the club is too technically slanted, but I also hear that it also too beginner oriented. So far I'm pleased hearing both of these comments. My personal feelings are that you can get what you want from the club no matter where you are on the scale of experience. But you can't get it if you don't join, participate, and give feedback to the club officers. It is entirely up to you.

I would like the club to do the following in 85:

(1) Get some sort of local club discount with a vendor.
(2) Get a permanent stable local bulletin board.
(3) Hold an auction to raise money for the club treasury.
(4) Join the Michigan Compoter Consortium
(5) Form more SIG groups.
(6) Be of more help to the novice user and new UPCO member.

Are these goals possible? I believe so but only with your support and participation. I'm going to try and write an UPCO Notes column each month for ENERGY. I will also try to get other UPCO members to write for ENERGY. What can UPCO do for you? What can you do for UPCO?

I welcome feedback from this column. Please call me at 517-321-3425 or send me a message on Phil Stults RBBS at (517) 393-5360. See you at the next meeting!

P.S. This column was produced on an IBM XT using Personal Editor then uploaded to Joe Werner via a Hayes 1200 external modem using SMARTCOMM II.

DAYTON HAMFEST COMING
by Lee A. Hodges

[Editor's note: This article appeared in the last Energy with the wrong dates. The dates have been corrected.]

I have had it with ice and snow. It is now time to turn my thoughts to the early spring -- really the weekend of April 27th and the annual trek to the Dayton Hamfest. A co-worker and I made the journey last year and had a great time.

I happened to be at the book store last week and looking in the ham magazines found the announcement of this years Dayton event. It will be April 26th thru 28th. I had planned to go again this year and mentioned the fact at the M3G Exec meeting and everyone at the table wanted to go too. Joe Werner thought that we should get an announcement in Energy to find out who else might like to go with us. If you are interested in going or would like more information you can call me (Lee Hodges) at 669-3258 or Frank Golinar at 351-1899. Frank has agreed to help set up car pools, so if you would like to drive or would like to ride with someone else let us know.

The drive to Dayton is about 4 hours, so the trip can be a made in one day. We try to leave with the idea of arriving at the hamfest by 9:30 or 10. On Saturday the hamfest lasts till 6 in the evening, so this leaves plenty of time to get sore feet. Hint: plan on doing a lot of walking. Last year the amount of computer goodies (wives can read this as junk) was something to behold and I am looking forward to the trip this year.

))))) CLASSIFIED (((((

For sale IBM PC - $2500. This system includes:

(1) IBM PC system unit with 64KB and keyboard
(2) 2 CDC double sided double density 5 1/4" disk drives
(3) IBM monochrome monitor board with parallel port
(4) IBM monochrome monitor
(5) Persyst time spectrum board -
    256 KB of memory
    (can be piggybacked for 256 KB additional memory)
    1 Serial port
    1 clock
    Print spooler/ram drive software
(6) DOS 2.0
(7) Complete original manuals for all of the above items

If interested call Skip Osterhus at 517-321-3425 anytime.

CoCo NOTES

By Terry Feichtenbiner
CCUG President

It seems like the only computing I have time to do these days is word processing! I wanted to do a review of DEFT PASCAL for the Color Computer, but it's taking too long for me to get thru my PASCAL textbook. I finally lent the compiler to Mike Brandl to check out.

It seems that Radio Shack has some bugs in their EXPRESS ORDER program. The way it's supposed to work is the stores keep a list of software that they can get from their warehouse in less than five days. Customers get popular software from local dealers at magazine prices and with only a short wait. Stores keep their inventory low yet carry great software and get customers to come in the door TWICE. This sounds great for everyone and it probably will be. When I heard about EXPRESS ORDER I figured I'd give it a try. A magazine ad for DEFT PASCAL provided a RS order number and invited me to run down to my local dealer to order it. Having some prior experience with Radio Shack, I decided to call around first. I called the Computer Center, a regular Shack store and a non-Tandy Shack. One dealer never heard of EXPRESS ORDER, one failed to return my call as promised and one tried for three days to find the product before giving up. I finally ordered directly form DEFT SYSTEMS and the compiler was delivered less than ten days later. DEFT said that there was no shortage of the product and that they had heard that TANDY had some warehouse problems. I'd like to hear of anyone else's experiences (good or bad) with EXPRESS ORDER.

TELEVISION AND THE COCO

By John Evans

A long time ago, I read a letter to a CoCo magazine from a reader who had to take his tape recorder off the top of his television set in order to use it without I/O errors. He tilted his recorder and the problems disappeared. He wrote in thinking the tape recorder was defective.

Removing the tape recorder off the television rather than tilting the recorder was the key to the mystery. Consider the reason you use a television with your computer...visual display. The visual display of a television is the Cathode Ray Tube (CRT) or picture tube. In order to create that screen, there is a vertical deflection and a horizontal deflection (X,Y axis for all of the mathematicians out there).

The horizontal deflection sweep signal is 15,750 Hz. The high voltage to the picture tube anode is 10-20,000 volts in B & W sets and about 17-30,000 volts in color sets. Even with shielding, a television can be a great garbage generator!

The horizontal section is often (but not always) on the left side of your TV. The anode of the picture tube is usually located near the top. In getting back to that computerist, he was working against himself by placing the recorder on his television set.

The best place for your tape recorder, disk drive unit, modem, or cables is away from the horizontal section of your television. Place your equipment on the side of the TV that has the channel selector.

The last recommendation is the MOST IMPORTANT one. Remember the high voltage applied to the picture tube? Please do not touch the screen of your television set while holding onto the ground of your computer's cables. It may shock you plus damage your CoCo if both the computer and television are turned on!

CCUG Member Malcolm Cleveland submits this short directory utility for Color Computer tape-based systems. Type in and save this utility, then put a tape in your recorder and RUN the program.

```
10 CLS:PRINT@7,"TAPE A - DIRECTORY"
20 PRINT"  SELECT A PROGRAM NUMBER AND"
30 PRINT"   TYPE 'RUN' WHEN I SAY 'OK'"
40 PRINT:PRINT"1."
50 PRINT"2."
60 PRINT"3."
70 PRINT"4."
80 PRINT"5."
90 PRINT"6."
100 PRINT"7."
110 PRINT"8."
120 INPUT"SELECTION NUMBER";A:A=FIX(A)
130 IF A<1 OR A>8 THEN PRINT@334,"";:GOTO 120
140 PRINT@159,"*";:PRINT@416,"";
150 IF A=1 THEN CLOAD ELSE X=159
160 FOR I=1 TO A-1
170 SKIPF:PRINT@X," ";:X=X+32
180 PRINT@X,"x";:PRINT@416,"";
190 NEXT:CLOAD
```

C.H.A.O.S. WELCOMES YOU TO THE WORLD OF THE ATARI

CHAOS is not affiliated with Atari

CAPITOL HILL ATARI OWNERS' SOCIETY

C.H.A.O.S IS:

C.H.A.O.S is the Capitol Hill Atari Owners Society. CHAOS meets every third Saturday in the Foster Community Center (200 N. Foster). The meetings run from 9am-12 noon. The presentations at meetings include new hardware and software and news. Business is limited at general meetings to make the meetings more enjoyable.

C.H.A.O.S MEETINGS ARE:

FUN, EXCITING, INFORMATIVE, AND CHAOTIC

You will have to see a CHAOS meeting to believe it. The discussions are lively, with lots of news and information. The presentations are of general interest. The speakers arrange their presentations to be understood by the beginners in the group as well as the experts.

The presentations at any meeting may include wordprocessors, games, databases, educational applications, utilities, hardware, and hardware modifications and enhancements.

There are experts and beginners in CHAOS and there are Special Interest Groups periodically when interests arise.

C.H.A.O.S. IS YOUR BEST COMPUTER PERIPHERAL

In addition to receiving a monthly newsletter that will keep you informed of local, national, and international events in computers, you will have access to the largest Atari public domain library of programs in the world.

C.H.A.O.S. HAS OVER 600 PROGRAMS IN ITS LIBRARY.

The CHAOS library is growing every day. This can save you a great deal of time and money. Programs that you write can be added to the CHAOS library. If you would like a listing of the programs in our current library, please send a large self-addressed, stamped envelope. Include an extra 50 cents if you are not a CHAOS member to cover printing costs. Mail your request to CHAOS, PO Box 16132, Lansing, Mich 48901.

C.H.A.O.S. RUNS A BULLETIN BOARD SYSTEM

CHAOS runs a Bulletin Board System that you can dial into if you own a modem. The telephone number for the BBS is 517-627-4243. CHAOS's BBS is one of the most sophisticated systems in existence. It provides a means of leaving messages for other computer owners and a means of obtaining FREE software. Join CHAOS now and get your password right away.

CHAOS's Officers and Leaders

Position	Name	Phone#
President:	Leo Sell	
Vice president:	Lance Ward	
Treasurer:	Rob Peck	
Newsletter Editor:	Mike Aldrich	
Program Librarian:	Guy Hurt	
Pub. Librarian:	Mike Aldrich	
Rec. Secretary:	Sandy Theisen	
Cor. Secretary:	Dick Peterson	
Program Coordinator:	Diane Benshaw	
BBS Sysops:	Barry Schroeder	
" "	Mike Clewley	
BBS Librarian	John Nagy	

C.H.A.O.S. NEWSLETTER EXCHANGE

If your Atari users group would like to exchange newsletters with CHAOS PLEASE send your newsletter to the following address:

C.H.A.O.S.
ATTENTION: NEWSLETTER EXCHANGE
P.O. BOX 16132
LANSING, MICHIGAN 48901

Please update you current list of CHAOS addresses, officers, and BBS number with the previous information.

C.H.A.O.S. PUBLICATIONS LIBRARY

CHAOS has many books and other publications about the Atari computers that can be checked out by members. Each month CHAOS receives newsletters from other Atari clubs from around the world.

HOW TO JOIN C.H.A.O.S.

If you would like to join CHAOS then fill out a membership form or send your Name, address and any other information about yourself you would like and $12.00 (Yearly membership fee) to:

CHAOS
ATTN: MEMBERSHIP
P.O. BOX 16132
LANSING, MICHIGAN 48901

PRESIDENT'S CORNER
by Leo Sell

Now that April is here many of us Atarians are looking anxiously for the new Atari products. Since this is written 6 weeks in advance I don't know if they are on time or not. We should be hearing something by the time you read this. At this writing Atari insists everything is on time.

From what I am reading about GEM, there is a good chance that it will become a standard across the industry. It is available for IBM and Commodore as well as Atari. Digital Research claims that the GEM O/S is very transportable. Maybe there is some possibility of cross compatibility. Who knows?

If you are not looking through the newsletters we recieve from other clubs you are missing alot of interesting facts and programs. There is a great deal of programming expertise out there. Almost any problem you might run into with a commercial program is solved by someone out there. For instance, when Synfile came out, a utility was promised to convert FileManager 800 and FileManager Plus files over to a format usable by Synfile. It was slow in coming out so someone out there wrote a program to do it. He uploaded to CompuServe for public-domain use. Synapse was so impressed with the program they bought the marketing rights and intend to market it as their promised utility. I know we have people out there with good programming skills. It would be great to see some good programs written by CHAOS members being submitted to the library, to the newsletter and to major magazines. I know you're out there, let's see your work real soon.

Recruiting is still a critical need in the club. I hope you are asking around and finding Atari owners. Urge them to join and take advantage of the CHAOS resources available. You might also look around at who's missing from the meetings. Call some of our old members you know, whose membership has lapsed and urge them to rejoin and give us the benefit of their expertise.

A number of items are missing from the Publications library. If you know any of these people, please contact them and tell them to return the materials. The following is a list of people and items:

1. Player/Missile Graphics from Atari on VCR/Beta - Taken when we met at the City of Lansing DP Center July or August 1984.

I hope this finds you computing happily and enjoying your Atari. Until next month, CU later.

MUSINGS...
by Leo Sell

Elections are over, time to put out a call for volunteers for other positions. These positions are as important as any Board position. They all have an important effect on the health of the club. Following is a list of available positions and a description of each:

Membership Coordinator: Responsible for taking new member information at the door and by mail and adding it to the membership database. Updating and maintaining the membership database (keep track of expiring memberships, etc.) If possible, running of mailing labels for the newsletter. (Labels and database provided.) A volunteer for this position should have a printer and a disk drive. Arrangements can be made otherwise however.

Program Coordinator: Responsiblity is to act as a contact person for people who wish to make a contribution to our meetings. Inform the President of the presentations arranged, time required for each and any special needs or requirements. Responisble for arranging a location for our meetings.

Equipment Coordinator: Reponsible for arranging sufficient equipment for the presentations scheduled and for the library. Generally a minimum of 3 computers and disk drives, 2 color TVs or monitors and 1 BW TV. Close contact is required with the Program Coordinator. In fact it may be combined with that position for greater efficiency.

All three of these positions are extremely important. They must be filled in order to continue having interesting meetings, sufficient equipment and monthly newsletters. None of them should take more than an hour or two of your time per month. If no one volunteers we may not have any of these. I cannot make this point strenuously enough. If you don't do it, it will not get done!!

There is a lot of excitement out there. The new Atari products are producing great expectations throughout the computer industry. The excitement is tempered by a concern that it may all be "vaporware." Sure hope we are seeing them available by the time you read this.

If you are not checking out our exchange newsletters you are really missing out on a lot of information. The same thing with the Atari SIG on Compuserve. If you have any Atari related problem, someone in the SIG can help you solve it.

Happy computing. Remember...Love an Atari,...take a byte of an Apple!

READ-ONLY DOS
by Claus Buchholz

Say you have a series of long BASIC programs and you want to put them on a disk. You also want a menu program that automatically boots in and then loads and runs a selected program on that disk. In such a situation, RAM and disk space are at a premium. It is a waste to have Atari DOS take up 5K of RAM and 5K of disk space. If your programs don't output to disk, you don't need the file creation and maintenance features of a full-blown DOS.

This was the case with a course we developed at Program Design, Inc., so I wrote a read-only DOS that occupies less than 700 bytes and only 5 disk sectors. I call it RDOS. RDOS can read standard DOS files, but it can't write, rename or delete them.

RDOS must be written to a freshly-formatted disk and leaves 705 free sectors. You may use Atari DOS (or any compatible DOS) to write files to the RDOS disk just as you normally would. The directory and file structures are the same. The very first file you write to the RDOS disk should be a SAVEd BASIC program.

When you boot the disk, RDOS goes to BASIC and automatically RUNs the first program in the directory. If that program is a menu program, it can display the directory and RUN another BASIC program or read a data file.

What Exactly Is RDOS?

RDOS is merely an input-only disk handler that interfaces with the Atari Operating System and uses the file structure of standard Atari DOS. It is not really a disk operating system at all. If you type 'DOS' from BASIC, or power-up without BASIC, you'll only get the memo pad or the self-test.

All RDOS can do is read files from the disk. It can't read the directory of the disk. That job is left to the menu program. Nor does it use regular file names. Each file is accessed by a single-character name. "D:@" refers to the first file on the disk, "D:A" refers to the second, "D:B" to the third, and so on. Again, it is the menu program's job to convert regular filenames to these codes. This way, the directory routines take up RAM space only when they are needed.

One restriction is that RDOS can handle only one open file at a time. If your program tries to OPEN a file before CLOSEing the previous file, it will get an error. Also, RDOS communicates only with drive number 1.

RDOS does have good points, though. It returns standard error codes if an error should occur. It supports both forms of input command - GET and INPUT - in BASIC and in machine language. It survives SYSTEM RESET and protects itself in RAM by setting MEMLO. It uses 'Burst I/O' (see Reference 1) so it can read just as quickly as Atari DOS 2.0S. Finally, it gives you 4K more RAM and over 4K more disk space.

Creating RDOS

The BASIC program in Listing 1 will format a disk and write RDOS to it. The program prompts you to insert a new disk before it formats. It also does error checking on the machine-language data in DATA statements. It's a bit of typing, but you only have to do it once. Once you've created a RDOS disk, you can use Atari DOS to duplicate it.

The BASIC program in Listing 2 is a menu program that displays the first 18 programs (other than itself) on the disk and asks which of them it is to RUN. It should be SAVEd to a freshly-created RDOS disk before any other files are written. You may modify the program if you want to change the display or show more programs. Here is an explanation of the menu program:

Line 5 sets the coldstart flag and disables the BREAK key. If your programs are properly error-trapped, this provides a form of protection against LISTing.

Lines 10-13 define a machine-language routine that accesses the disk directory sectors. Don't alter these lines unless you know what you're doing.

Line 20 initializes some strings, a variable, and an array. SEC$ is to be used as a buffer for the directory sectors.

Line 25 sets up a simple menu display.

Lines 30-90 are a loop that looks at each entry in the directory to see if a file is there. If so, the file number is stored in the array of file pointers and the filename is printed. You can change the PRINT lines to suit your display and you can change the number of files displayed in lines 20 and 30. Don't change any other lines in the loop unless you know enough about directory structure.

Line 100 completes the display.

Line 110 asks for a program number, converts it to the single-character filename, and RUNs the program.

The Source Code

The source code in Listing 3 is provided for study only. You needn't type it into an assembler to use RDOS. The program in Listing 1 is all you need, unless you wish to modify RDOS.

The source for RDDOS provides examples of two details in Atari programming: boot files and device handlers. See Reference 2 for complete descriptions of these.

RDDOS is a boot file which is 5 sectors long. A boot file is not a standard DOS file, but it can coexist on a DOS disk. A boot files always starts on sector 1 of the disk and is automatically loaded into the computer on power-up. Atari DOS uses a 3-sector boot file which looks for the DOS.SYS file and loads it if it's there. RDDOS is completely contained in its 5-sector boot file, so it needs no DOS.SYS file. That's why it doesn't appear on the directory.

Immediately after loading, RDDOS redefines the screen editor device E:. Since BASIC is always looking to E: for input, this routine causes E: to send the string 'RUN"D:B"', so that BASIC will RUN the menu program.

The initialization routine, INIT, is called after loading and after every SYSTEM RESET. Its job is to set MEMLO to preserve RDDOS's place in RAM, and to put D: into the device table. It also sets an internal flag to show that no file is open.

The vector table for D: points to the I/O routines in RDDOS. The output, status, and special routines are non-existent, so they return a 'function not implemented' error.

The OPEN routine checks to see if any other files are open and, if so, returns an error. It then checks that this OPEN is for input. If so, it finds the filename character and calculates the location of the directory entry for the file. If there is no valid file there, it returns with a 'file not found' error. Otherwise, it reads the first sector of the file into its buffer, sets up the buffer pointer, and returns.

The GETBYTE routine checks that the IOCB number matches the file that's open. This prevents having two files open simultaneously, since RDDOS has only one sector buffer. It then fetches the next byte in the buffer, updating the pointer. If that empties the buffer, it reads the next sector into the buffer and resets the pointer. It then returns with the data byte in the A register.

CIO calls GETBYTE once for every byte read. That process is slower than the disk drive itself and would make reading long files unacceptably slow. RDDOS uses a direct-read method patterned after 'Burst I/O' described in Reference 1. This method disobeys the normal CIO-handler hierarchy but, since Atari DOS uses it, it should be safe.

Whenever the sector buffer is empty, GETBYTE checks to see if CIO is trying to fill a user's buffer longer than 128 bytes, the size of a disk sector. If so, it will read the next sector directly into the user's buffer, saving much time. RDDOS is careful to maintain CIO's pointers so that CIO doesn't get confused by the illegal transfer.

Comments in the source listing should aid in study of the details of RDDOS.

Could Be Useful

RDDOS is best suited to running one or several BASIC programs that don't need to save data. Games, educational programs, and audio-visual demos would benefit from its simplicity. And it's better than a write-protect tab at guarding the contents of your disk from erasure by probing or mischievous fingers.

References

1. "Inside Atari DOS" by Bill Wilkinson, COMPUTE! Books, 1982

2. "Atari Operating System User's Manual, #CO16555" , Atari, 1980

LISTING 1

```
100 ? :? "Initializing.":DIM CIO$(34):S=0:FOR I=1 TO 34
:READ D:S=S+D:CIO$(I)=CHR$(D):NEXT I
110 IF S<>3345 THEN ? "ERROR IN CIO$ DATA":END
120 DATA 104,162,16,104,104,157,66,3,104,157,69,3,104,1
57,68,3,104
130 DATA 157,73,3,104,157,72,3,32,86,228,132,212,160,0,
132,213,96
140 OPN=3:CGET=7:CPUT=11
150 REM CALL COMMAND: Y=USR(ADR(CIO$),CMD,BUFAD,BUFLN)
160 DIM LDR$(153):S=0:FOR I=1 TO 153:READ D:S=S+D:LDR$(
I)=CHR$(D):NEXT I
170 IF S<>22391 THEN ? "ERROR IN LDR$ DATA":END
180 DATA 173,246,191,133,128,173,247,191,133,129,169,24
2,141,224,2,169,191,141,225,2,160,0
190 DATA 169,242,141,226,2,169,191,141,227,2,32,198,191
,133,130,32,198,191,133,131,201,255
200 DATA 208,4,197,130,240,238,32,198,191,133,132,32,19
8,191,133,133,32,198,191,145,130,165
210 DATA 130,197,132,208,6,165,131,197,133,240,9,230,13
0,208,235,230,131,76,163,191,32,195
220 DATA 191,76,125,191,108,226,2,165,128,201,252,208,8
,165,129,201,159,208,2,230,128,165
230 DATA 128,205,248,191,208,15,165,129,205,249,191,208
,8,104,104,32,243,191,108,10,0,177
240 DATA 128,230,128,208,2,230,129,96,108,224,2,0,128,1
03,191,103,191,0,5,242,191
```

LISTING 1 Continued (RDOOS)

```
250 DIM FN$(20),X$(40),SPC$(8190),BUF$(16230)
260 ? :? "Insert the disk and enter the":? "device:file
name of the object file."
270 POKE 764,255:INPUT FN$
280 OPEN #1,4,0,FN$
290 Y=USR(ADR(CIO$),CGET,ADR(BUF$),16230):IF Y=1 THEN ?
 "ERROR- ";FN$;" is too long.":END
300 IF Y<>136 AND Y<>3 THEN ? "ERROR # ";Y;" in reading
 ";FN$:END
310 SA=48999-PEEK(856)-256*PEEK(857):IF SA<=40956 THEN
SA=SA-1
320 CLOSE #1:I=INT(SA/256):POKE ADR(LDR$)+143,SA-256*I:
POKE ADR(LDR$)+144,I
330 ? :? "The cartridge program is ";(49152-SA)/1024;"K
":? "bytes long. What size EPROM are you"
340 ? "using (4 or 8 K bytes)";:POKE 764,255:INPUT X$:K
=VAL(X$)
350 IF K<>4 AND K<>8 THEN ? CHR$(28);:GOTO 340
360 SK=K*INT(SA/1024/K):? :? "You'll need ";(48-SK)/K;"
 of them."
370 ? :? "Insert the disk and enter the":? "device:file
name (without extender) of":? "the EPROM data files."
380 POKE 764,255:INPUT X$:FOR I=1 TO LEN(X$):IF X$(I,I)
="." THEN POP :? CHR$(28);:GOTO 380
390 NEXT I:X$(LEN(X$)+1)=".":FN$=X$:AD=ADR(BUF$)-(SA-10
24*SK)
400 FOR P=SK TO 47 STEP K:I=48+INT(P/4)+7*(P>=40):FN$(L
EN(X$)+1)=CHR$(I)
410 IF K=8 THEN FN$(LEN(X$)+2)=CHR$(I+1)
420 OPEN #1,8,0,FN$:? :? "Writing ";FN$
430 PUT #1,255:PUT #1,255:PUT #1,0:PUT #1,P*4:PUT #1,25
5:PUT #1,(P+K)*4-1
440 BL=1024*K:IF P+K=40 THEN BL=BL-4
445 IF P+K=48 THEN BL=BL-153
450 Y=USR(ADR(CIO$),CPUT,AD,BL):IF Y>1 THEN 480
460 IF P+K=40 THEN PUT #1,255:Y=USR(ADR(CIO$),CPUT,AD+B
L,3):AD=AD-I:IF Y>1 THEN 480
465 IF P+K=48 THEN Y=USR(ADR(CIO$),CPUT,ADR(LDR$),153):
IF Y>1 THEN 480
470 CLOSE #1:AD=AD+1024*K:NEXT P:? :? "Done.":END
480 ? "ERROR # ";Y;" in writing ":FN$:END
```

LISTING 2

```
10 DIM FN$(20)
20 ? :? "Enter the device:filename for the     version
compiled at 1F00."
30 INPUT FN$:OPEN #1,4,0,FN$
40 ? :? "Enter the device:filename for the     version
compiled at 2600."
50 INPUT FN$:OPEN #2,4,0,FN$
60 ? :? "Enter the device:filename for the     version
to be compiled at 0700."
70 INPUT FN$:OPEN #3,8,0,FN$:TRAP 100
80 GET #1,X:GET #2,Y:IF X<>Y THEN X=X-24
90 PUT #3,X:GOTO 80
100 IF PEEK(195)<>136 THEN ? "ERROR-   ";PEEK(195);" AT
 LINE ";PEEK(186)+256*PEEK(187)
```

FEBRUARY MEETING MINUTES
Sandy Theisen

At the meeting in February we had several excellent presentations. First was Mike S. who gave a great demonstration of the Atari touch tablet.

Next was Brian Goluska who demonstrated two different games that are currently available. The first was SPY vs. SPY. According to Brian it has a great concept of two people being able to play at the same time using a split screen but it was not quite as fun as he had hoped. The other game Brian demonstrated was RETURN OF HERCACLES which was a multi player game and Brian felt it was a better game than the first because it was able to hold his interest much longer.

Following Brian's presentation was Leo Sell with a printer demo. For anyone wishing to purchase a printer in the future it was an excellent opportunity to see several different printers in operation and the type of print that was available from each one. We were able to see three printers in action: The Mannesman Tally Spirit 80, Gemini 10X and the Prowriter. Alot of members took the break time to come and look over the different machines to try to decide which was right for them.

It was also announced at the meeting that Brian Sladek has lost his power supply and if anyone has accidently walked off with it from one of the meetings, Brian would really appreciate having it returned.

** D O N ' T F O R G E T **

Beginning in April we have a new meeting place for 5 months. Our spring/summer meeting hours will be 10:00 am to 2:00 pm at the following locations:

April 20, East Lansing Library

May 18, Lansing Library-Auditorium

June 15, Lansing Library-Auditorium

July 20, Lansing Library-Gallery

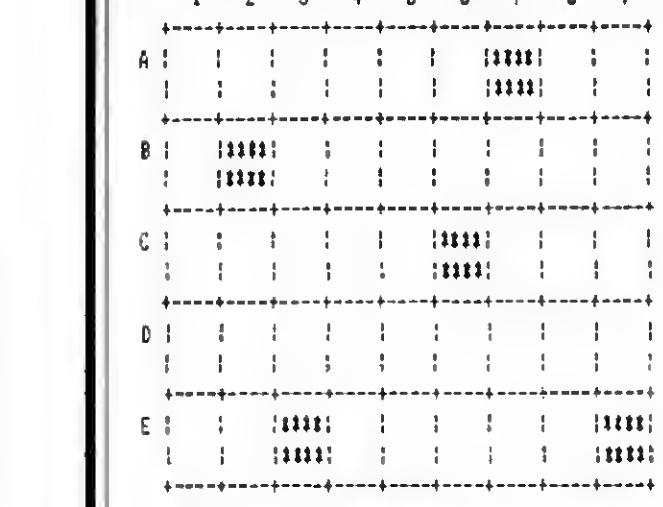
August 17, Lansing Library-Gallery

See y'all there.

** D O N ' T F O R G E T **

MULE Puzzle #1
by Ralph Fellows

The diagram below represents the MULE map. The mechtrons have been prospecting, but without success -- so far they haven't found any crystite at all. The five plots marked with asterisks have assayed out at NO CRYSTITE.



Still, as all good MULE players know, there are three three-dot crystite plots somewhere on the map. Can you find them?

Answer on page below comic.

MARCH MEETING MINUTES
Sandy Theisen

Election of officers was held, and the following people are our new officers. Actually I should say all of the old officers were reelected to their previous positions.

President - Leo Sell
Vice President - Lance Ward
Treasurer - Rob Peck
Corr. Sec. - Dick Peterson
Rec. Sec. - Sandy Theisen

Leo is asking for volunteers. If you would like to help out in any please talk to Leo we; can always use any help. Three things mentioned were: program coordinator, equipment coordinator and membership chairman. So please offer your help.

John Nagy has written a program for the club library that looks great. It is called Diskkeeper and can be found on Utility Disk #13. It has several options available to help keep track of your programs on disk, update your files and print labels for your disk or listings. It looks like a great addition to the club library.

Guy Hurt gave another one of his excellent presentations using a VCR. From the quality of his presentation you know it took alot of time to prepare. Guy has reorganized the Demo and Utility Disks into different categories and if you are interested in a specific area such as word processors, you now only need to purchase one or two disks where before they would appear on several different disks grouped with different items. Guy also previewed games disk #27. Two of the games it includes are Popcorn and Tricky Traks.
Lee Kronenburg gave a nice demo of Crossword Magic. Anyone who is interested in crossword puzzles will find this program very interesting.

The Atari Light Pen was demonstrated by Jim Tuma and does many of the same things as the Touch Tablet only using the light pen. Jim said that one of the drawbacks appears to be that the files are not compatable.

An interesting demo of F-15 Strike Eagle was given by Bruce Meck. He felt that the program has limited graphics but he found the game very playable.

The meeting was ended by Mike Aldrich giving a demonstration of Ghostbusters, the ACE 80 column board and the Print Shop. Ghostbusters is a nice game, but Mike said he is returning his two copies for ones that have the voice synthesis in them. The ACE 80 cartridge adds a new spectrum to the Atari (80 columns at a low price). 80 column devices cost upwards in the area of $200 or more in the past. Last, but certainly not least was the Print Shop, an exciting new printing utility for the Atari. It

March Meeting Minutes Continued

gives you the ability to make your own custom Greeting cards, Banners, Signs, and Letterheads for your stationery. It also has a Graphic editor for even more custom printing and does Screen Magic. Members were very impressed and a group buy was organized. See Mike for a

TRY THIS LITTLE PROGRAM!

```
10 REM ** SIREN **
20 FOR I = 255 TO 1 STEP -4
30 SOUND 0,I,10,10
40 GOSUB 70
50 NEXT I
60 END
70 FOR W = 1 TO 100:NEXT W:RETURN
```

Capitol Hill Atari Owner Society Phone List

Aldrich	Mike	517/374-	Hahn	Marion	517/882-	Richardson	Greg	517/882-
Assiff	Thomas C	313/758-	Hail	Bill	517/882-	Robbins	Leonard	517/371-
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Chattulani	Diana	517/349-	Lu	Dang T	517/694-	Straley	Ronald W	313/420-1
Christensen	Robert	517/669-	Manchester	David	517/592-	Szkotnicki	Michael	517/339-
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Forslin	John	517/485-	Peterson	Dick	517/485-			
Gardner	Ivan	517/694-	Phenney	Jerry	517/394-			
Gavin	Richard A	517/669-	Pothacamury	Innaiah	517/332-			
Genshaw	Bill	517/355-	Price	Linda	517/625-			
Goldstein	Marvin	517/332-	Proudfoot	Wendell	517/371-			
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HELP YOUR CLUB TODAY

FROM MARK CANTRELL!

"GEEZ! TALK ABOUT A PERSONAL COMPUTER!"

Answer to MULE Quiz #1

The three-dot crystite plots are A4, B9, & D1.

BEGINNERS CORNER

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DOS FUNCTIONS FROM BASIC

Using the following routines, it is possible to access certain DOS file management functions from a running BASIC program. The following routines will access LOCK/UNLOCK, RENAME, DELETE, and FORMAT.

The command format is:

XIO #n,device,0,0,"filename" where:

#n - a particular XIO command
iocb - the channel being used (1-5)
device - D1:-D4:,P:,E:,S:,R:, or C:
filename - your filename

For example to DELETE a file called MYFILE.BAS:

XIO 33,#1,0,0,"D:MYFILE.BAS"

To RENAME a file:

XIO 32, #1,0,0,"D:OLDNAME,D:NEWNAME"

To UNLOCK a file on drive 2:

XIO 36,#1,0,0,"D2:filename"

Note that "wildcards" will work the same as in DOS. For example to lock all files on drive one:

XIO 35,#1,0,0,"D:*.*

To FORMAT a disk:

XIO 254, #1,0,0,"D:1" (or D2:)

Be advised that commands like FORMAT or DELETE do NOT ask you to verify the operation. When you issue this command...BAM! it's done. So be sure you have the right disk in the right drive!

There are other XIO commands for GETTING and PUTTING data, as well as to OPEN and CLOSE files. See your reference manual for further information on this very handy Atari function. Following are the XIO commands to perform basic file functions:

DELETE - XIO 33
LOCK - XIO 35
UNLOCK - XIO 36
RENAME - XIO 32
FORMAT - XIO 254

DISABLE YOUR BREAK

POKE 16,64:POKE 53774,64 will make your BREAK key inoperative.

A GRAPHICS command will cancel this out, so you may have to call this as a subroutine after any GRAPHICS command.

READING YOUR CONSOLE SWITCHES

The console switches on your Atari may be read by PEEKING location 53279. Doing this will return a value which will tell you what key or keys if ay are being pressed. The following values may be returned when this location is PEEKED. The syntax is KEY=PEEK(53279).

PEEK(53279)=

0 - START/OPTON/SELECT pressed
1 - OPTION/SELECT pressed
2 - OPTION/START pressed
3 - OPTION pressed
4 - SELECT/START pressed
5 - SELECT pressed
6 - START pressed
7 - NO console key pressed

If you POKE 53279,0 you will get a click from your keybpard speaker. Handy if you require a click.

RE-RUN A BASIC PROGRAM IF THE RESET KEY IS PRESSED

Pivot

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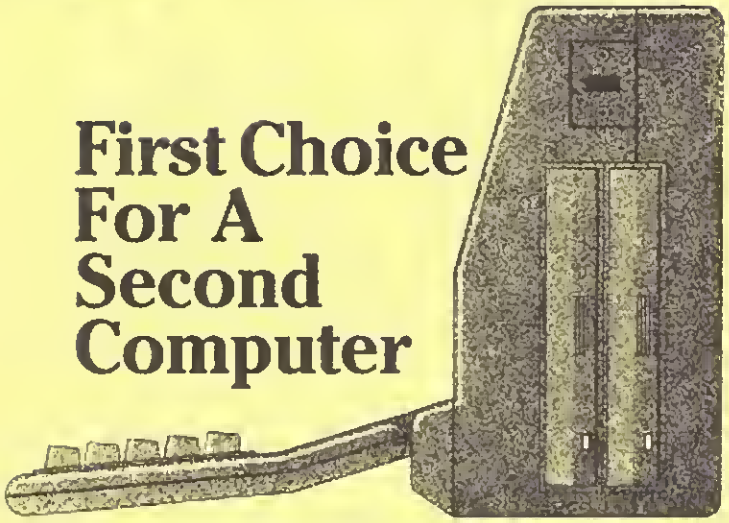

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